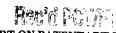
# Translation

## PATENT COOPERATION TREA



# **PCT**



18 MAR 21"

# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or security file - f						
Applicant's or agent's file reference 664044	FOR FURTHER ACTI	ACTION See Form PCT/IPEA/416				
International application No.  International filing			Priority date (day/month/year)			
PCT/JP2003/012320	26 September 2003		27 September 2002 (27.09.2002)			
International Patent Classification (IPC) or national classification and IPC C07D 473/18, 473/16, 473/24, 473/34, 473/40, A61K 31/522, 31/5377, 31/55, A61P 11/06, 17/00, 31/12, 35/00, 37/02, 37/08, 43/00						
Applicant SUMITOMO PHARMACEUTICALS COMPANY, LIMITED						
This report is the international prelim     Authority under Article 35 and transn	inary examination report, enitted to the applicant according	established by this rding to Article 36	International Preliminary Examining			
2. This REPORT consists of a total of _	4 sheets, incl	uding this cover sh	leet.			
3. This report is also accompanied by Al	NNEXES, comprising:					
a. (sent to the applicant and to	o the International Bureau,	a total of	sheets, as follows:			
sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).						
sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.						
b. (sent to the Internationa	l Bureau only) a total	of (indicate type	e and number of electronic carrier(s))			
b (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)), containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).						
4. This report contains indications relating	g to the following items:					
Box No. I Basis of the repo	rt					
Box No. II Priority						
Box No. III Non-establishme	nt of opinion with regard to	o novelty, inventiv	e step and industrial applicability			
Box No. IV Lack of unity of			,			
Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement						
Box No. VI Certain documen						
Box No. VII Certain defects in	the international applicati	on				
Box No. VIII Certain observations on the international application						
Date of submission of the demand		Date of completion of this report				
26 April 2004 (26.04.2004)		08 Oct	ober 2004 (08.10.2004)			
Name and mailing address of the IPEA/JP		Authorized officer				
Facsimile No.	Telep	hone No.				

### INTERNATIONAL PRELIMANY REPORT ON PATENTABILITY

ı	
	In ional application No.
	PCT/JP2003/012320

1. With a	egard to the language, this report is based on the international app							
	ise marcated under this item.	lication in the language in which it was filed, unless						
	This report is based on translations from the original language which is language of a translation furnished for the purpose of:	into the following language,						
	international search (under Rules 12.3 and 23.1(b))							
İ	publication of the international application (under Rule 12.4							
	international preliminary examination (under Rules 55.2 and	Vor 55.3)						
and ar	egard to the elements of the international application, this reped to the receiving Office in response to an invitation under Article and annexed to this report):  The international application as originally filed/furnished the description:  ages  ages*  received by this received by this received by this ages*  received by this received by this received by this ages*  received by this received by this ages*	, as originally filed/furnished  S Authority on  Authority on  , as originally filed/furnished as amended (together with any statement) under Article 19 Authority on  Authority on  , as originally filed/furnished as amended (together with any statement) under Article 19 Authority on  , as originally filed/furnished Authority on						
a	sequence listing and/or any related table(s) – see Supplemental Bo	· · · · · · · · · · · · · · · · · · ·						
3 T	the description, pages the claims, Nos. the drawings, sheets/figs the sequence listing (specify): any table(s) related to sequence listing (specify):	·····						
111	is report has been established as if (some of) the amendments a ade, since they have been considered to go beyond the disclosule 70.2(c)).  the description, pages the claims, Nos. the drawings, sheets/figs the sequence listing (specify): any table(s) related to sequence listing (specify):	ure as filed, as indicated in the Supplemental Box						
	applies, some or all of those sheets may be marked "superseded."							

#### ARY REPORT ON PATENTABILITY

International application No.				
	PCT/JP03/12320			

Box No. V Ro	No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement					
1. Statement			, , , , , , , , , , , , , , , , , , ,			
Novelty (I	N) .	Claims	1-46	YES		
		Claims		NO		
Inventive step (IS)	Claims	5-7, 10, 12, 13, 16-25, 28, 29	YES			
	Claims	1-4, 8, 9, 11, 14, 15, 26, 27, 30-46	NO			
Industrial applicability (IA)	Claims	1-46	YES			
		Claims		NO		

- 2. Citations and explanations (Rule 70.7)
- 1. WO 99/28321 A1
- 2. JP 11-193282 A
- 3. EP 1043021 A1
- 4. WO 98/01448 A1

#### I. Claims 1-4, 8, 9, and 11

Document 1 describes a drug that has the compounds represented by General Formula (I) as its active ingredient. The compounds of Examples 39, 40, 45, and 62, which are concrete compounds of General Formula (I), are equivalent to the compounds of General Formula (I) of this application. Furthermore, page 27, lines 16 to 17, lists a transdermal agent, aerosol agent, etc., as dosage forms of the drug. Therefore, persons skilled in the art can easily formulate the compounds of Examples 39, 40, 45, and 62 as a transdermal agent or aerosol agent.

As a result, based on the description in document 1, the inventions of claims 1-4, 8, 9, and 11 lack an inventive step.

#### II. Claims 14, 15, 26, 27, and 30-46

Document 1 describes the compounds represented by General Formula (I) that are useful as an interferon inducing agent, antiviral agent, anticancer agent, etc., and as concrete compounds it describes those in which R<sup>1</sup> is an alkyl group substituted by a lower alkoxy carbonyl group (Examples 39, 40, 45 and 62).

Document 2 describes compounds represented by General Formula (I) that have chemical structures similar to those of the compounds described in document 1 and have similar activity. Document 2 lists an alkoxy carbonyl group and also an alkyl carbamoyl group as R<sup>2</sup> (equivalent to R<sup>1</sup> of document 1).

Because it is common practice in the technical field involving chemicals used as drugs for persons skilled in the art to modify terminal substituents and obtain compounds that are optimal or preferable as drugs, this examination finds that persons skilled in the art can easily conceive of using an alkenyl group, etc., in place of the alkyl group moiety and replacing the oxycarbonyl group with a carbamoyl group, etc., in the compounds described in document 1.

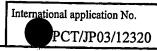
Furthermore, this examination finds that the compounds of claims 14 and 15 of this application do not provide any particular outstanding effect in comparison with the compounds described in document 1.

As a result, based on the descriptions in documents 1 and 2, the inventions of claims 14, 15, 26, 27, and 30-46 lack an inventive step.

(Continued)

#### INTERNATIONAL PRELI

#### RY REPORT ON PATENTABILITY



Supplemental Box

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In case the space in any of the preceding boxes is not sufficient. Continuation of Box V:

III. Claims 5-7 and 10

Neither document 1 nor document 2 describes or suggests that when compounds in which the benzyl group at position 9 is replaced by a substituent equivalent to  $-Y^2-Q^2$  in the present application are applied topically, they are quickly metabolized and converted to substances with low activity, and this matter is not obvious to persons skilled in the art.

As a result, the inventions of claims 5-7 and 10 of this application are novel and involve an inventive step with respect to documents 1 and 2.

IV. Claims 12, 13, 16-25, 28 and 29

Documents 1-4 neither describe nor suggest the compounds of claims 12, 13, and 16-25 of this application, and these compounds cannot easily be conceived of by persons skilled in the art.

As a result, the inventions of claims 12, 13, 16-25, 28, and 29 of this application are novel and involve an inventive step with respect to documents 1 and 2.

Form PCT/IPEA/409 (Supplemental Box) (January 2004)